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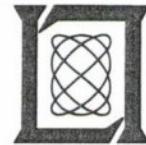
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31 December 1988

Lincoln Laboratory

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

LEXINGTON, MASSACHUSETTS



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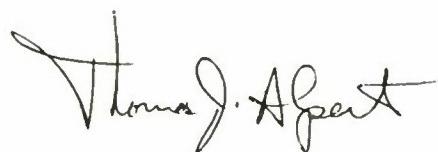
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FOR THE COMMANDER

A handwritten signature in black ink, appearing to read "Thomas J. Alpert".

Thomas J. Alpert, Major, USAF
Chief, ESD Lincoln Laboratory Project Office

FOREWORD

Volume 12 of Unclassified Publications of Lincoln Laboratory lists reports published from 31 December 1985 to 31 December 1986, as well as updated information on earlier publications.

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750	A Measure of the Randomness of Signals and Suggested Applications	Reiffen, B.	7 Mar. 1986 ADA168916
751	The Completion of a Star Catalog for the Optical Aircraft Measurements Program	Taff, L.G.	7 Apr. 1986 ADA168017
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5505A	Limitations on Power-Transfer Efficiency in Three-Guide Optical Couplers	Donnelly, J.P.	IEEE J. Quantum Electron., Vol. QE-22, No. 5, May 1986, pp. 610-616 ADA174742
5650	Statistical Model-Based Algorithms for Image Analysis	Therrien, C.W. Quatieri, T.F. Dudgeon, D.E.	Proc. IEEE, Vol. 74, No. 4, April 1986, pp. 532-551
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5712	Electromagnetic Scattering by Arbitrarily Shaped Reflectors: Subreflector Efficiency	Dion, A.R. Muresan, L.V.	IEEE Trans. Antennas Propag., Vol. AP-33, No. 12, December 1985, pp. 1338-1346 ADA168254
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5747	Speech Analysis/Synthesis Based on a Sinusoidal Representation	McAulay, R.J. Quatieri, T.F.	IEEE Trans. Acoust. Speech Signal Process., Vol. ASSP-34, No. 4, August 1986, pp. 744-754
5752	Comments on "Integral Equation Formulations for Imperfectly Conducting Scatterers"	Rogers, J.R.	IEEE Trans. Antennas Propag., Vol. AP-33, No. 11, November 1985, pp. 1283-1284 ADA168204
5762	Linewidth Control with Masked Ion Beam Lithography Using Stencil Masks	Randall, J.N. Bromley, E.I. Economou, N.P.	J. Vac. Sci. Technol. B, Vol. 4, No. 1, Jan/Feb. 1986, pp. 10-14 ADA167747
5767	Double-Heterostructure InGaAs/InP PIN Photodetectors	Diadiuk, V. Groves, S.H.	Solid-State Electron., Vol. 29, No. 2, February 1986, pp. 229-233 ADA167365

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5769	M-ary FSK Performance for Coherent Optical Communication Systems Using Semiconductor Lasers	Jeromin, L.L. Chan, V.W.S.	IEEE Trans. Commun., Vol. COM-34, No. 4, April 1986, pp. 375-381 ADA174704
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5771	Superconductive Analog Signal Processing Devices	Withers, R.S.	Supercond. Tech. Rev., No. 85-2, July 1985, pp. 1-6
5775	Distribution of Nitrogen and Defects in SiO _x N _y /Si Structures Formed by the Thermal Nitridation of SiO ₂ /Si	Vasquez, R.P. Madhukar, A. Grunthaner, F.J. Naiman, M.L.	J. Appl. Phys., Vol. 59, No. 3, 1 February 1986, pp. 972-975
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5777	The Contrast of Ion Beam Stencil Masks	Randall, J.N. Stern, L.A. Donnelly, J.P.	J. Vac. Sci. Technol. B, Vol. 4, No. 1, Jan/Feb. 1986, pp. 201-204 ADA167612
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5801	Theoretical Temperature Dependence of Solar Cell Parameters	Fan, J.C.C.	Solar Cells, Vol. 17, No. 2-3, April-May 1986, pp. 309-315
5802	Spectroscopic and Laser Characteristics of Ti:Al ₂ O ₃	Moulton, P.F.	J. Opt. Soc. Am. B, Vol. 3, No. 1, January 1986, pp. 125-133
5804	Use of Zone-Melting Recrystallization to Fabricate a Three-Dimensional Structure Incorporating Power Bipolar and Field-Effect Transistors	Geis, M.W. Chen, C.K. Mountain, R.W. Economou, N.P. Lindley, W.T. Hower, P.L.	IEEE Electron Device Lett., Vol. EDL-7, No. 1, January 1986, pp. 41-43 ADA169504
5805	Surface Damage on GaAs Induced by Reactive Ion Etching and Sputter Etching	Pang, S.W.	J. Electrochem. Soc., Vol. 133, No. 4, April 1986, pp. 784-787 ADA170555
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5810	Characterization and Entrainment of Subboundaries and Defect Trails in Zone-Melting-Recrystallized Si Films	Geis, M.W. Smith, H.I. Chen, C.K.	J. Appl. Phys., Vol. 60, No. 3, 1 August 1986, pp. 1152-1160 ADA172571

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5812	Laser Etching of 0.4- μ m Structures in CdTe by Dynamic Light Guiding	Arnone, C. Rothschild, M. Ehrlich, D.J.	Appl. Phys. Lett., Vol. 48, No. 11, 17 March 1986, pp. 736-738
5813	Low Resistance Pd/Ge/Au and Ge/Pd/Au Ohmic Contacts to n-Type GaAs	Chen, C-L. Mahoney, L.J. Finn, M.C. Brooks, R.C. Chu, A. Mavroides, J.G.	Appl. Phys. Lett., Vol. 48, No. 8, 24 February 1986, pp. 535-537
5814	Millimeter-Wave Monolithic Circuits for Receiver and Transmitter Applications	Chu, A. Courtney, W.E. Mahoney, L.J. Clifton, B.J.	RCA Rev., Vol. 46, No. 4, December 1985, pp. 421-430
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5856	Monolithic GaAs/AlGaAs Diode Laser/Deflector Devices for Light Emission Normal to the Surface	Windhorn, T.H. Goodhue, W.D.	Appl. Phys. Lett., Vol. 48, No. 24, 16 June 1986, pp. 1675-1677 ADA170410
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5862	Design and Performance of a Wideband Multilayer Feed Network	Abouzahra, M.D.	1986 IEEE Trans. Microwave Theory Tech. Symp. Digest, June 1986, pp. 143-146
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5886	Frequency-Noise Cancellation in Semiconductor Lasers by Nonlinear Heterodyne Detection	Bondurant, R.S. Welford, D. Alexander, S.B. Chan, V.W.S.	Opt. Lett., Vol. 11, No. 12, December 1986, pp. 791-793
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5896	Laser Photochemical Etching of Molybdenum and Tungsten Thin Films by Surface Halogenation	Rothschild, M. Sedlacek, J.H.C. Ehrlich, D.J.	Appl. Phys. Lett., Vol. 49, No. 22, 1 December 1986, pp. 1554-1556
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6605	Future for Cryogenic Devices for Signal Processing Applications	Reible, S.E.	Chapter 29, <i>Advanced Signal Processing</i> , Peter Peregrinus, London, U.K., 1985, pp. 248-256
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